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ABSTRACT

The paper describes The Individualized Training Plans-Goal Setting Procedure (ITP) in which students training to be special education teachers interact with a computer in an individualized session to establish a prioritized set of training goals. The model is discussed, and four phases (relevance of each goal area, performance expectations and expectations for change, prioritization of training goals and budgeting of available training time, and a summary) are reviewed. Student reactions to the ITP are analyzed in terms of satisfaction, aspects liked least and most, and student teacher assurance of final competence. It is explained that the students were well satisfied with the procedure, more assured of their final competence, initiated contact for their advisement more often, and saw themselves as having grown more. (CL)

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INDIVIDUALIZED TEACHER TRAINING FOR MAINSTREAMING USING A COMPUTER ASSISTED GOAL SETTING PROCEDURE

Paper Presented at the 57th Annual
International Convention
of the
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by

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"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

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[1]Procedure developed while Associate Director, The University of Michigan BEH Dean's Grants Project on Mainstreaming (Percy Bates, Ph.D., Director).

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Individualized Teacher Training for Mainstreaming Using a Computer Assisted Goal Setting Procedure

Terry Lee West, Ph.D.
April, 1979

Public Law 94-142, The Education of All Handicapped Children Act, has mandated major changes in the way we serve handicapped children. These changes have ramifications for the entire service delivery system, from classrooms and schools through state and federal agencies. The universities which prepare classroom and special personnel do not escape change.

For example, P.L. 94-142 mandates that an individualized education program be developed for every handicapped child receiving special education or related services. Nancy West and I teach the mainstreaming courses at the University of Colorado. One device we use to illustrate the ethic of the IEP is a cartoon by Charles Schultz. It shows Charlie Brown and Linus leaning on a fence. Linus says, "My teacher says teaching is a lot like bowling. All you can do is throw the ball down the middle and hope you touch most of the students." Charlie says, "She must be a bad bowler too!"

We told that story one day to a group of undergraduates and one voice from the back of the room commented, "If individualization is so great, why are you lecturing this group about it?"

Teacher education faces the same dilemma that classroom teachers do in regard to the time and effort individualization requires--but the problem is one of logistics rather than values. We believe that individualization is good and that it works, but we have difficulty trying to do it with the resources available.[1]

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[1]cf. West, T. and Bates, P., "The implications of mainstreaming for teacher education," in Bates, P., West, T.L., and Schmerl, R.B. Mainstreaming: Problems, Potentials, and Perspectives. Minneapolis: University of Minnesota National Support Systems Project, 1977.

Back in the mid-1970's at the University of Michigan we ran squarely into the problem. The School of Education was investigating different models of teacher education. One of the more innovative was William C. Morse's, Teaching as a Psychological Process, which Nancy coordinated for several years. This humanistic program won an AACTE Distinguished Achievement Award in 1974. Two aspects were especially interesting: (1) Morse's three-factor model which defined teaching in terms of teaching competence, interpersonal relationships, and personal and stylistic development (figure 1); and (2) a goal-setting process through which students participated actively in their own training. However, in a logistical sense, the goal-setting process was incredibly cumbersome, involving a battery of nine tests and hours of feedback and counseling for each individual in the program. It was evident that there was a need for some means of facilitating student involvement in setting their own training goals, and yet which was more realistic in terms of faculty time and effort.

During the same period in which Morse's program was experimenting with goal-setting, the University of Michigan received one of the Bureau for the Education of the Handicapped Deans' Grants Projects on Mainstreaming. Dr. Percy Bates served as the director, I was the associate director, and later Nancy became the coordinator. Dr. Morse was a member of the Advisory Committee.

In the formative stage of the mainstreaming project it was apparent that, if we were going to teach people about individualized education programs, perhaps we should consider individualizing the training program to some extent.

When we looked at the literature and research on goal-setting, we found firm evidence to the effect that self-goal-setting resulted in

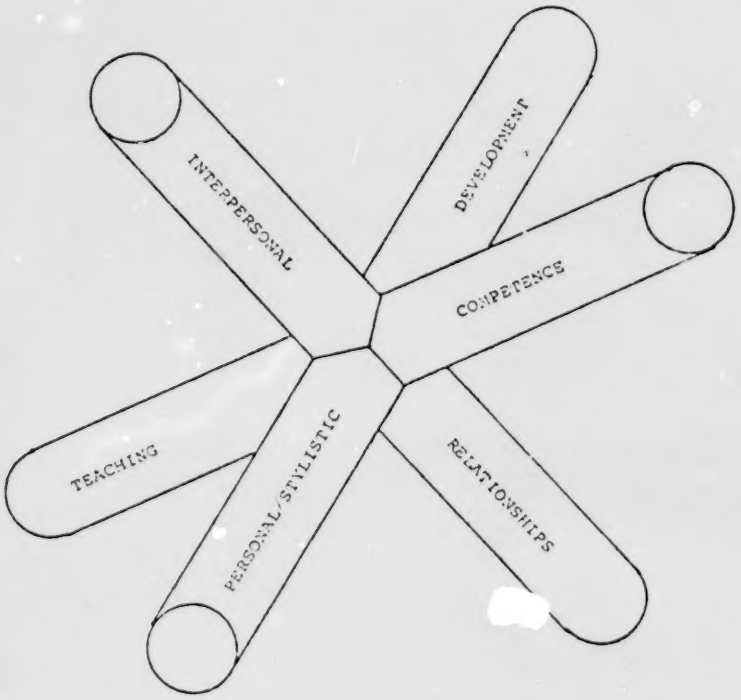

Fig. 1.-- Interaction of Teaching Competence, Interpersonal Relationships, and Personal/Stylistic Development in the Morse Model.

increased satisfaction and even increased competence. This was apparent even if people only set goals, without even formulating ways for achieving them or expending effort to reach them!!

We were familiar with a mathematical psychology decision-making model developed by Ward Edwards called Social Utility Theory which looked useful for helping students training to be teachers to prioritize training goals.[1] We extended Edward's model so that goal priorities became a function of expected change adjusted by the relative importance of the goal to the person.

We were also fortunate in having a well-developed computing system at the university. So we wrote a program in which each student interacted with the computer for a 30-45 minute individualized session to establish a prioritized set of training goals. We called the whole procedure the Individualized Training Plans Goal-Setting Procedure--ITP for short--thus making our contribution to the proliferation of acronyms burdening education. The procedure involves four phases:

1. assessment of the relevance of each goal area to the professional role of teacher;
2. determination of performance expectations and expectations for change;
3. prioritization of training goals and budgeting of available training time;
4. a summary section.

The model which forms the framework in which the goals are set is an extension of Morse's three-factor model across the knowledge, attitude, and performance domains. This extension we named the Conceptual Training Model

[1]Edwards, W. "Social Utilities." Paper presented at the U.S. Naval Academy, Annapolis, Maryland, June 19, 1971 (Mimeographed).

in recognition of its function as a framework. The West and Bates chapter of Grosenick and Reynolds' new book[1] describes the model in greater detail (figure 2).

In regard to the computerized ITP process, we put together a catalog which descriptively defined for the students the eleven goal areas of the model. This six-page catalog helped the participants to understand each goal area. (Available on request).

In 1978, after half a dozen revisions of the goal-setting procedure, I evaluated its effects on general education student teachers.[2] Elementary student teachers were randomly assigned to two groups: one used the procedure and the other served as a control. Data was collected at two times: an initial stage during which the experimental group used the procedure to set goals while the controls did not, and a final stage ten weeks later. There were two sources of information: the students and their university supervisor, across the eleven goal areas of the model. The result was a 2 x 11 x 2 x 2 design (figure 3).

One of the first things we were interested in was student satisfaction with the procedure. We had anticipated that a 30-45 minute session on material as highly charged as views of oneself as a teacher might engender some resistance, especially as it involved the equivalent of 20 pages of interactive report. Results indicate however, that the students who used the procedure placed a great value on goal-setting and on their participation

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[1]West, T.L., and Bates, P. "The anatomy of a deans' grant project" in Grosenick, J.K. and Reynolds, M.C.(eds.), Teacher Education: Renegotiating Roles For Mainstreaming. Minneapolis: National Support System Project, University of Minnesota, 1978.

[2]West, T.L. "Training personnel for mainstreaming: evaluation of the computer-assisted individualized training plans goal-setting procedure with general education student teachers." Dissertation Abstracts, Ann Arbor: University Microfilms, 1978.

	Teaching Competence	Interpersonal Relationships	Personal/Stylistic Development
Knowledge	#1. Knowledge about teaching	#6. Knowledge about people	#9. Knowledge about self/teaching style
Attitudes	#2. Attitudes toward teaching	#7. Attitudes toward others	#10. Attitudes toward self/teaching style
Performance Abilities	#3. Planning/Preparation of learning environment	#8. Relating with others	#11. Personal and stylistic abilities
	#4. Implementation of educational program		
	#5. Classroom management		

Fig. 2.-- The Conceptual Training Model.

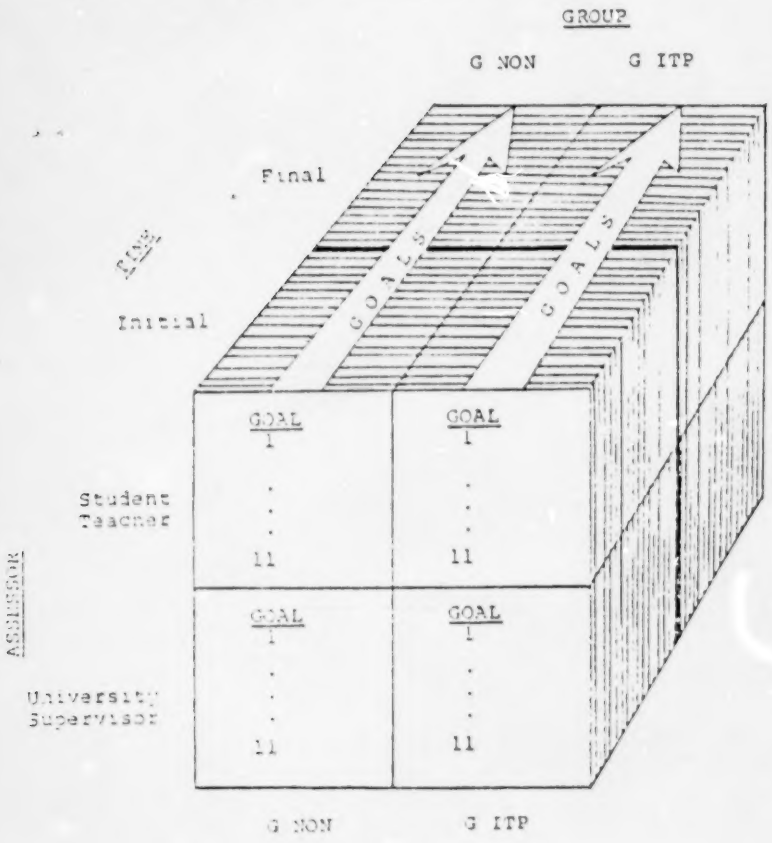

Fig. 3.-- Design of the Study: 2 Groups X 11 Goals X 2 Data Sources X 2 Times.

in the process (figure 4). They placed a high degree of confidence in their assessments of competence and of expected change. They found the procedure valuable and believed it useful in their training program. Twenty per cent felt that it took too long (figure 5), but they saw it as useful in clarifying their goals (figure 6).

When their assessments of final competence across the eleven goal areas was examined, those who used the procedure were significantly more assured of their competence (figure 7). This held true for the three dimensions of teaching competence, interpersonal relationships, and personal and stylistic development. The ITP group approached the same level of self-assessed competence as was achieved by the highly selected group of student teachers trained in the Teaching as a Psychological Process program (figure 8).

When the hours of contact student teachers spent with their supervisor is examined, the amount of time spent supervising was the same for both experimental and control groups (and for the other program), but the amount of advising time increased significantly approaching that of the humanistic program when adjustments for supervision load are made (figure 9). Since the supervisor was not aware of who the experimental or control students were, it seems reasonable to attribute the increased advising time to student-initiated contacts.

When students' initial expectations for their growth in competence are examined, the initial expectations of experimental students were not significantly different. When their assessments of final change are compared, there begins to be a difference, and when adjusted for initial differences in competence assessments, the goal-setting group viewed themselves as having grown significantly more than the non-goal-setting group (figure 10).

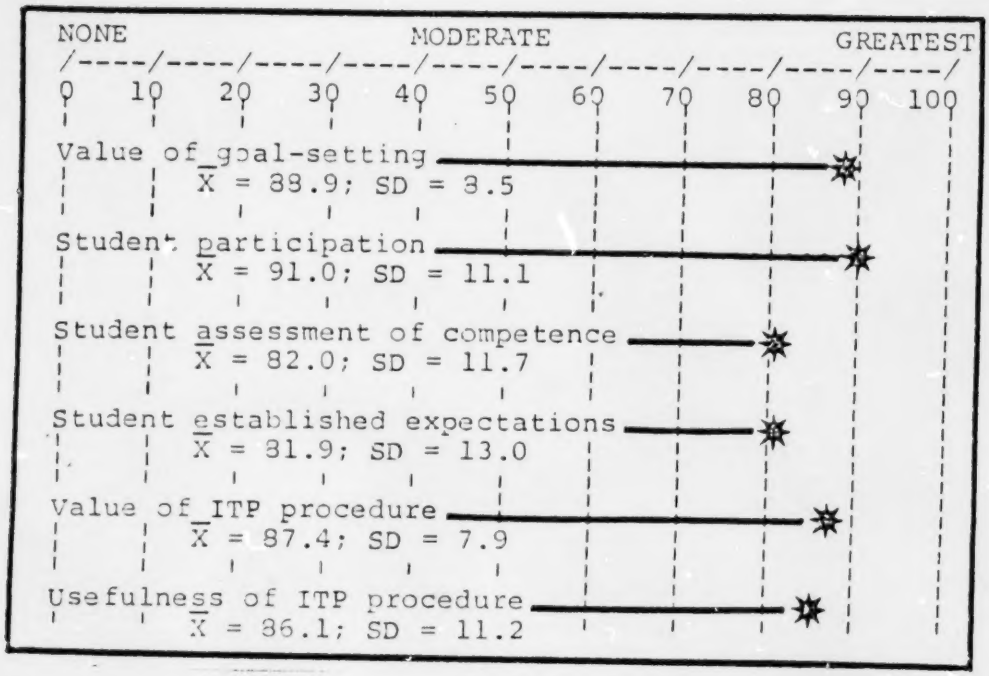
NONE
MODERATE
GREATEST
0 10 20 30 40 50 60 70 80 90 100
Value of goal-setting
X = 88.9; SD = 8.5
Student participation
X = 91.0; SD = 11.1
Student assessment of competence
X = 82.0; SD = 11.7
Student established expectations
X = 81.9; SD = 13.0
Value of ITP procedure
X = 87.4; SD = 7.9
Usefulness of ITP procedure
X = 86.1; SD = 11.2

Fig. 4.-- Mean Responses to the Six Student Satisfaction Questions.

Aspects Liked Least	Frequency	Percentage
Too Long/Too Much	9	20%
Difficulty in Assessment	8	18%
Time Allocation Section	6	14%
Need for Orientation	6	14%
Specific Aspects of Process	6	14%
Goals	4	9%
Other	5	11%
Total	44	100%

Fig. 5.-- Categorization of Responses to the Aspects-Liked-Least Item.

Aspects Liked Best	Frequency	Percentage
Goals Clarified	23	38%
General Positive	9	15%
Time Allocation	8	13%
Specifics of Process	6	10%
Thought Provoking	5	8%
Prioritization	4	7%
Summary Section	3	5%
Individualization/ Personalization	3	5%
Total	61	101%

Fig. 6.-- Categorization of Responses to the Aspects-Liked-Best Item.

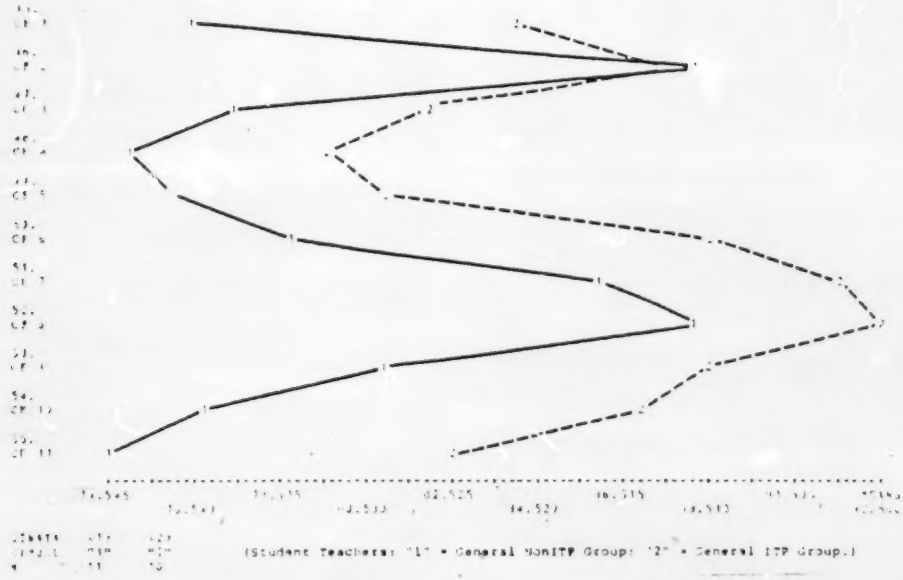

Fig. 7.-- Student Teacher Assurance of Final Competence.

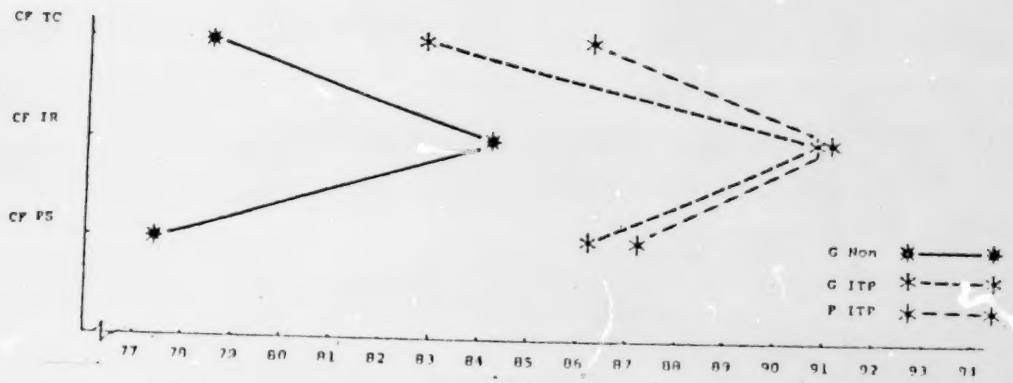

Fig. 8.-- Student Teacher Assurance of Final Competence by the Three Dimensions of the Morse Model, and in Comparison to the Teaching As A Psychological Process Student Teachers.

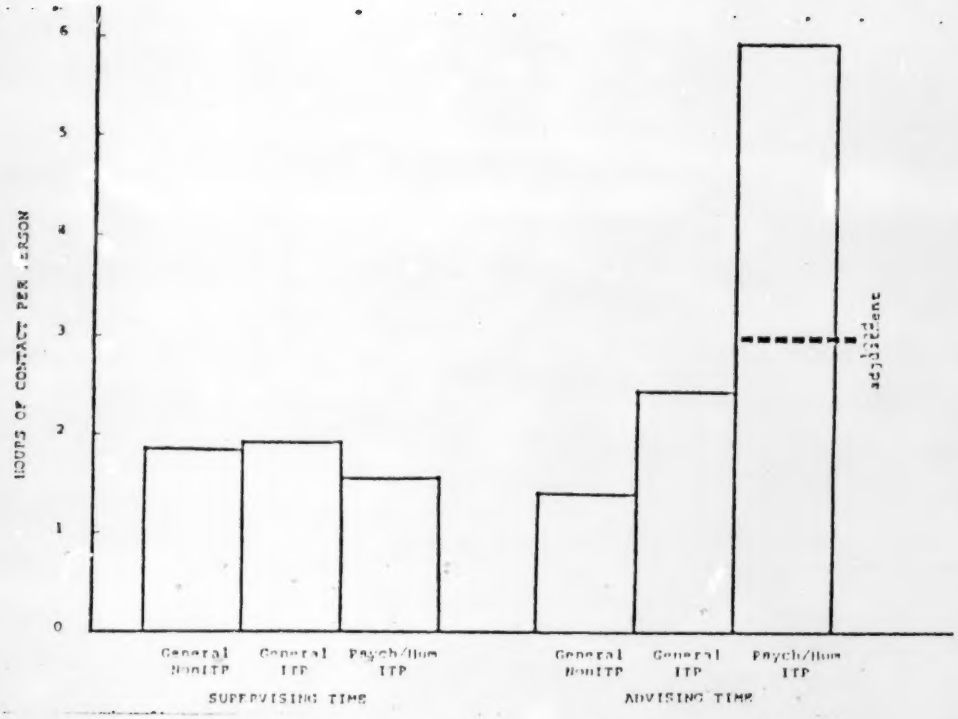

Fig. 9.-- Supervising and Advising Time for the Three Groups.

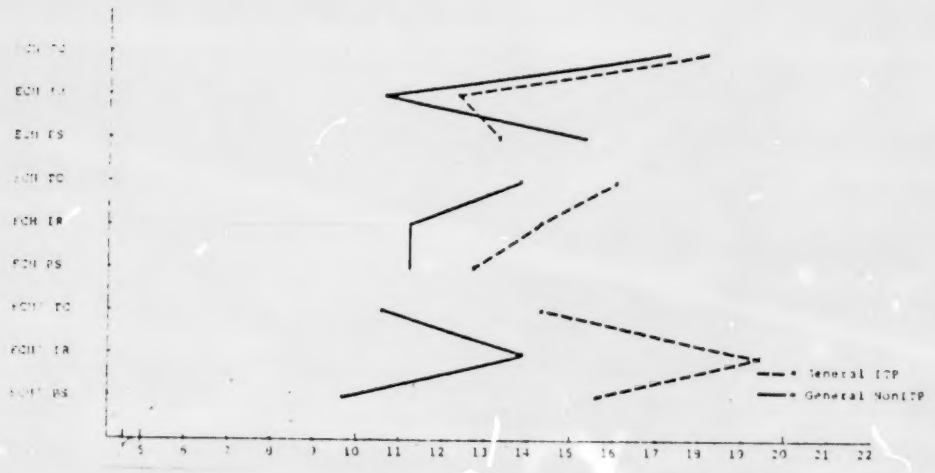

Fig. 10.-- Student Teacher Initial Expectations for Growth and Final Assessment of Growth.

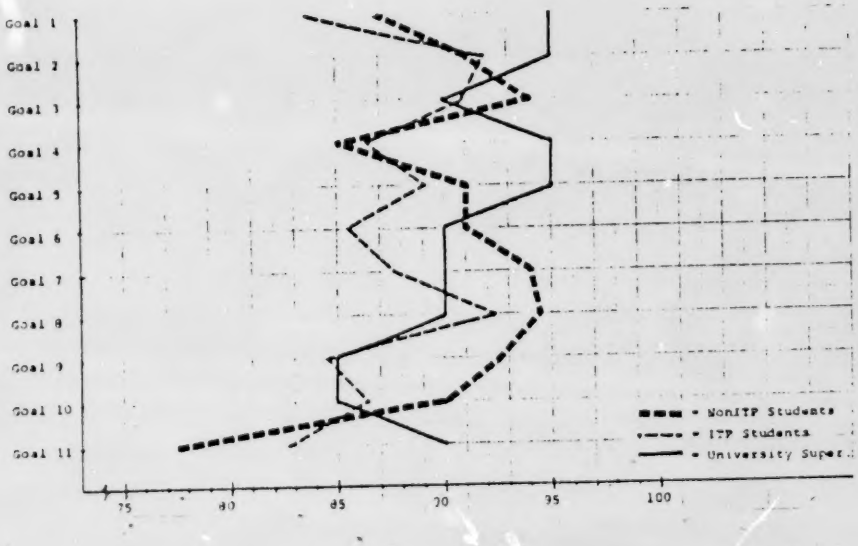

Fig. 11.-- Final Relevance Ratings of the Student Teachers and of Their University Supervisor.

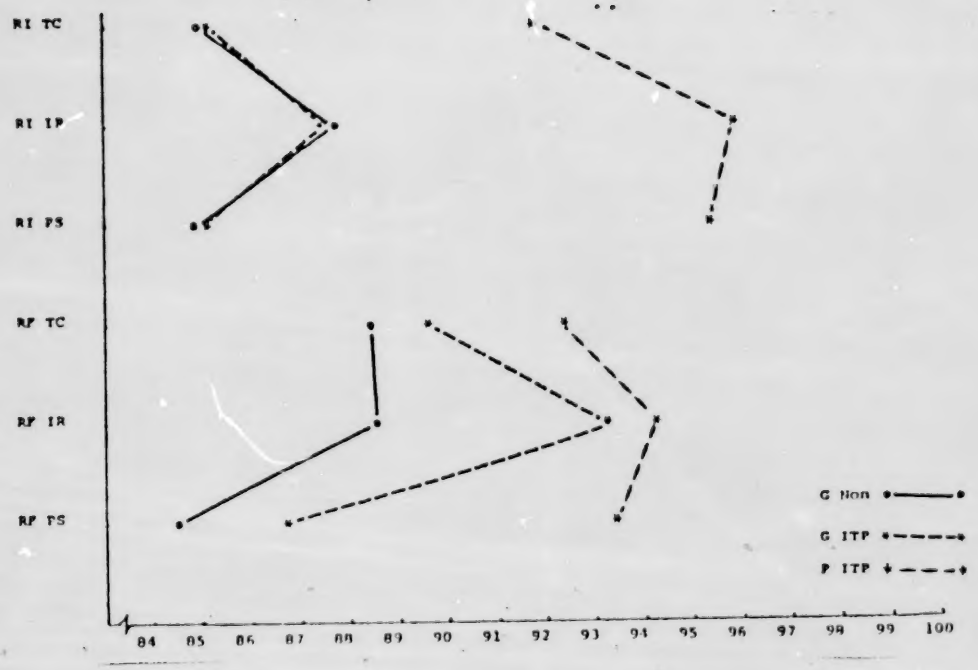

Fig. 12.-- Changes from Initial to Final Relevance of the Goals, and in Relation to the Teaching As A Psychological Process Group.

One hypothesis of the study was that the importance goal-setting students would finally give to the goals would come to more closely resemble the views of their supervisor. However, this was not found to be so (figure 11).

But there was an interesting occurrance in regard to changes in initial and final relevance (figure 12). As can be seen on the top of the graph, the relevance the goal-setters and non-goal-setters gave to these goals was almost identical, and much less than was given by the students in the program which specifically used the Morse model. However, after only 10 weeks, the goal-setters began to more closely resemble the relevance profile of the humanistic group.

In summary, we found that the students were well satisfied with the procedure, more assured of their final competence, initiated contact for advisement more often, and saw themselves as having grown more. While their views were not significantly more like their supervisor's, they did see the goals as being significantly more relevant.

In the future, work will continue on the Individualizing Training Plans Goal-Setting Procedure at the University of Colorado. There is a need for hard data on actual competence growth as opposed to self-perceptions, and for examination of alternative goal models for use with the procedure. Work has also begun on extending the procedure to include a computer-assisted evaluation and feedback system which would tie goal-setting into trainee and training program evaluation.